SECTION 1
INTRODUCTION

1.1 INTRODUCTION

1.1.1 Jefferson Proving Ground (JPG) is situated on 55,264 acres in Jefferson, Ripley, and Jennings Counties, Indiana (Figure 1-1). JPG was used as a U.S. Army Proving Ground between 1941 and 1995. Based on historic data, of the more than 27 million ordnance and explosives (OE) items tested at JPG's ranges, approximately 1.5 million may remain. Previous studies as well as OE clearance operations have confirmed the presence of OE at JPG.

1.1.2 JPG is physically divided into two sections, north and south of the firing line, by a fence along Firing Line Road (Figure 1-1). The northern portion, constituting approximately 51,000 acres, is known as the Northern Firing Range Area. This area contains unexploded ordnance (UXO) and the Army plans to retain ownership although other government agencies have expressed interest in leasing the area. The southern portion, constituting approximately 4,314 acres, is known as the Cantonment Area. The Cantonment Area is considered to be economically valuable in terms of reuse and approximately 3,400 acres are currently leased to the Ford Lumber and Building Supply Company. This area is being used for agricultural, light industrial and residential purposes. Another 230 acres in the vicinity of Krueger Lake is being transferred to Jefferson County. Building 216 and the associated railroad tracks have been transferred to the Madison Port Authority.

1.1.3 This Engineering Evaluation/Cost Analysis (EE/CA) project involves a 323-acre wooded site on the western side of the Cantonment Area (Figure 1-1). The purpose of this EE/CA is to determine the most appropriate response action to address any OE risk at the site. The following tasks were included:

?? determining the nature and extent of OE contamination at the site through site investigations;

Figure 1-1 site location map

- ?? performing a qualitative risk evaluation of the OE hazards present at the site;
- ?? identifying and developing response action alternatives;
- ?? screening the response action alternatives; and
- ?? performing a comparative analysis of the remaining response action alternatives.

1.1.4 This document was prepared consistent with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended, and the National Contingency Plan (NCP). This report has been prepared by Parsons Engineering Science (Parsons ES) for the U.S. Army Engineering and Support Center, Huntsville (USAESCH) under Contract Number DACA87-95-D-0018, Delivery Order 42.

1.2 BASE REALIGNMENT AND CLOSURE PROGRAM

1.2.1 This EE/CA has been performed by the US Army Corps of Engineers (USACE) under the Base Realignment and Closure (BRAC) program. The Base Closure and Realignment Act of 1988 (Public Law 100-526, 102 Stat. 2623) and the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510, 104 Stat. 1808) provide for a recurring, systematic review and evaluation of all installations operated by the U.S. Armed Forces. The purpose of the process is to create operational, economic, and strategic efficiency by recommending closure and/or realignment of installations to best serve the defense needs of the United States.

1.2.2 JPG was identified for closure in 1989 and its mission was reassigned to Yuma Proving Ground in Arizona following the closure of JPG on September 30, 1995. Disposal of property under the BRAC process includes an extensive screening process for potential new users. The EE/CA investigation for the 323-acre wooded site is part of this process.

1.3 STATE AND LOCAL REGULATIONS

State and local regulations have been considered as potentially appropriate and/or applicable requirements where indicated. Further, there has been close coordination with the local regulatory agencies to ensure they are fully informed and their concerns have been addressed. Substantive requirements, rather than administrative requirements, have been addressed.

1.4 OVERVIEW OF THE REMOVAL ACTION PROCESS

1.4.1 CERCLA and the NCP define removal actions as "the cleanup or removal of released hazardous substances from the environment, such actions as may necessarily be taken in the event of the threat of release of hazardous substances into the environment, such actions as may be necessary to monitor, assess, and evaluate the release or threat of release of hazardous substances, the disposal of removed material, or the taking of such other actions as may be necessary to prevent, minimize, or mitigate damage to the public health or welfare or to the environment, which may otherwise result from a release or threat of release."

1.4.2 Removal actions are categorized in three ways: emergency, time critical, and non-time critical based on the type of situation, the urgency and threat of the release or potential release, and the subsequent time frame in which the action must be initiated. Emergency removal actions for OE are conducted by military Explosive Ordnance Disposal (EOD) units to address immediate, unacceptable hazards. Time critical removal actions (TCRAs) for OE are conducted by the USACE to respond to an imminent danger posed by the release or threat of a release, where less than 6 months planning time exists before on-site activity must begin. Non-time critical removal actions (NTCRAs) for OE are conducted by the USACE in response to a risk to public safety where more than six months planning time is available. Each response is unique and may require a more expedited response based on the threatened population, contaminants of concern, or other factors.

1.4.3 Once a determination has been made that a NTCRA will be undertaken, an EE/CA is prepared to identify the objectives of the removal action and to analyze various alternatives that may be used to satisfy these objectives. In order to recommend an appropriate removal action, the alternatives are analyzed and compared for cost, effectiveness, and implementability.

1.5 EE/CA PURPOSE

The purpose of this EE/CA is to determine the most appropriate response action to address the UXO that may be located at the 323-acre wooded site.

1.6 PROJECT ORGANIZATION

1.6.1. Several organizations are directly involved in this project. Figure 1-2 illustrates the project team organization.

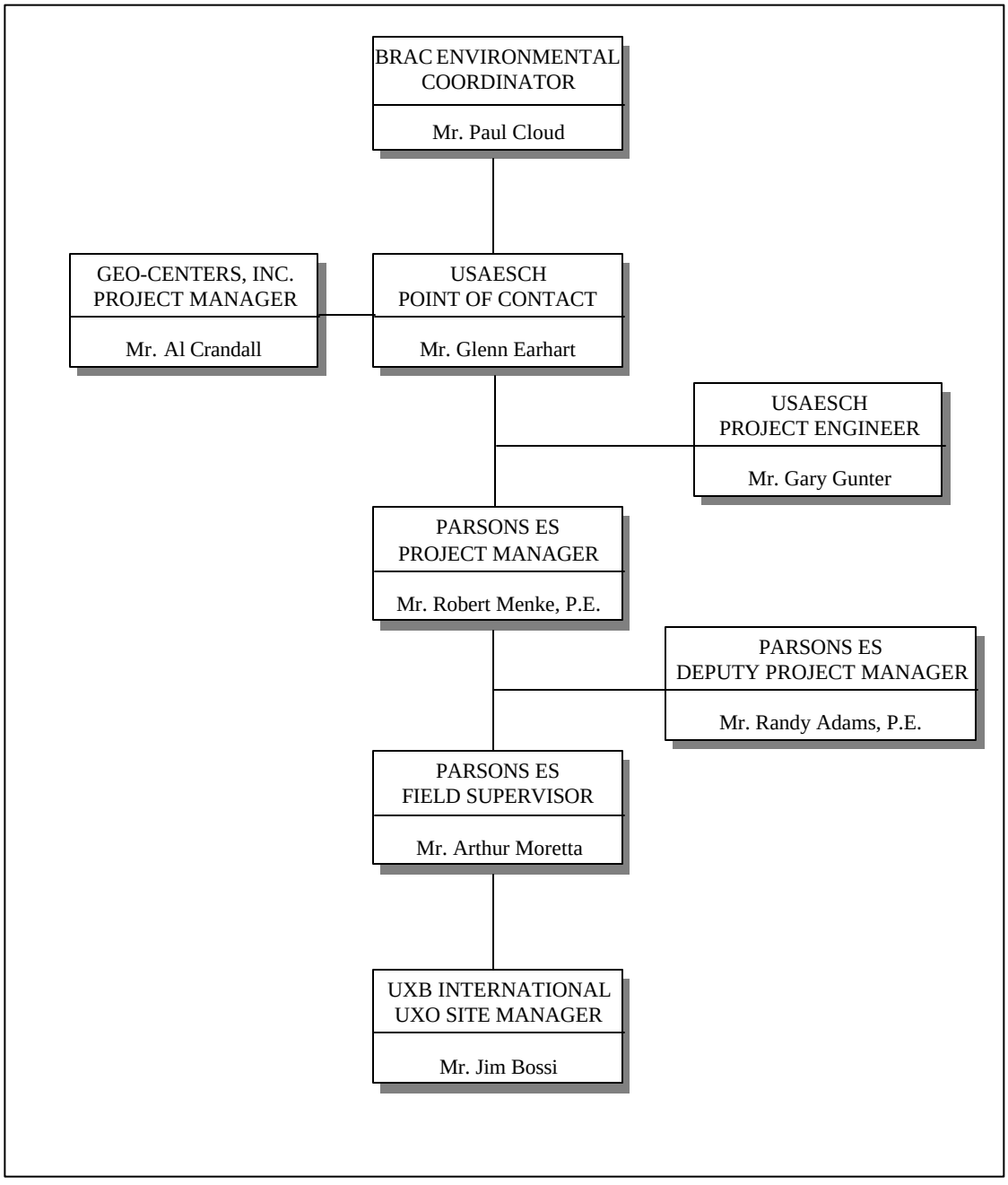
1.6.2 JPG. The U.S. Army Soldier and Biological Chemical Command (SBCCOM) is responsible for managing the closure, remediation and transfer of JPG property. The BRAC Cleanup Team is responsible for the environmental programs associated with this process. Mr. Paul Cloud, the BRAC Environmental Coordinator for JPG, is responsible for site management and public affairs activities in relation to this EE/CA investigation.

1.6.3 USAESCH. USAESCH is responsible for the management of the day-to-day activities, contract management and administration, and for the technical management at the site. Mr. Glenn Earhart, the USAESCH Point of Contact, is responsible for coordination of the OE Design Center functions for the EE/CA project. Mr. Gary Gunter is the USAESCH project engineer.

1.6.4 Parsons ES. Parsons ES provided the overall engineering support and services for the project. Parsons ES provided the personnel to oversee the intrusive investigations of the anomalies at the site. Parsons ES also provided the personnel to perform the institutional analysis, develop and implement the Impact Analysis for the site, and perform the EE/CA analysis of the results of the field investigation. Parsons ES is under contract to USAESCH. The Statement of Work for this project is included in Appendix A.

1.6.5 UXB International, Inc. (UXB). UXB performed the intrusive investigations of the anomalies identified by the government at the site. UXB is under contract to Parsons ES.

FIGURE 1-2
PROJECT TEAM ORGANIZATION
JEFFERSON PROVING GROUND
MADISON, INDIANA



1.6.6 GEO-CENTERS, Inc. (GEO-CENTERS). GEO-CENTERS is under direct contract to USAESCH to geophysically map selected areas of the site and to reacquire the anomalies identified during the geophysical survey for intrusive investigation by UXB. Parsons ES coordinated with GEO-CENTERS on logistical aspects of the anomaly reacquisition. All other coordination with GEO-CENTERS was through the USAESCH Point of Contact. GEO-CENTERS' final report on the results of the geophysical investigation is included in Appendix B.

1.7 PUBLIC OUTREACH

1.7.1 Public outreach for this project was included in the overall efforts of the JPG BRAC Cleanup Team, led by Mr. Paul Cloud. A Restoration Advisory Board (RAB) was formed in 1994 to provide for the discussion and exchange of information related to the closure of JPG between government agencies and the public. The RAB consists of individuals from state and federal regulatory agencies as well as residents from the local community. RAB meetings are held bimonthly and are open to the public. The meetings are announced in local newspapers and on the JPG website (www.jpg.sbccom.army.mil).

1.7.2 A Community Involvement Plan (CIP) has been prepared for the overall JPG project. The CIP details the program that is used to facilitate communication and information exchange with the community on the closure and reuse of JPG. Moreover, the plan provides a framework and the mechanisms for a sustaining partnership between the US Army and the community to jointly work on decisions affecting JPG. A copy of the CIP can be found on the JPG website (www.jpg.sbccom.army.mil).

1.7.3 An administrative record has been prepared for this project in an effort to keep the public informed on the key decisions made by the government. The administrative record contains almost 300 key documents relating to the cleanup and reuse of JPG. The record is composed of the plans, decision documents, news releases, and key correspondence documents from the investigation effort. Upon completion, this EE/CA report will become a part of the project's administrative record. The administrative record for the 323-acre wooded site EE/CA project is available for public examination at Hanover College, Dugan Library, 121 Scenic Drive, Hanover, Indiana, 47243.

1.8 REPORT ORGANIZATION

This report consists of ten sections and eight appendices. Section 1 contains an overview of the regulatory authorization for the project. Section 2 contains site characterization and background information including an overview of previous OE investigations performed at JPG. Section 3 discusses the field investigation performed and the results of that investigation. Section 4 provides the OE response action goal and objectives. Section 5 provides the identification and development of the potential response action alternatives. Section 6 presents the Impact Analysis of the OE hazards present at the site. Section 7 provides a screening evaluation of various OE response action alternatives. Section 8 provides a comparative analysis of response action alternatives. Section 9 provides the conclusions and recommendations for the EE/CA. Section 10 provides the references. Appendix A contains the Statement of Work for the project. Appendix B contains the GEO-CENTERS report on the geophysical survey conducted on the 323-acre wooded site. Appendix C contains a listing of the intrusive investigation results. Appendix D contains the UXB Report of Disposal. Appendix E includes the Institutional Analysis Report. Appendix F contains the detailed cost estimates and assumptions for the response alternatives retained for comparative analysis. Appendix G contains a copy of a US Fish and Wildlife letter on the status of any Federally listed species or critical habitat within the cantonment area of JPG. Appendix H contains a glossary of terms used in this report.